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ABSTRACT

The purpose of this module for college students is to describe the economic, social, intellectual, and political changes which took place during the Enlightenment period and to show the interrelationship between these changes and concepts behind due process of law. This resource contains an introduction to the module; a list of objectives for the student; some learning activities to precede the lecture study; and some questions for essay exams, projects, and discussion. However, the bulk of this resource is a lecture about the historical context within which due process of law developed. The lecture begins with a brief description of due process of law in England and the United States. Some economic and social background of medieval Europe is noted, followed by an explanation of the changes in the intellectual and religious life before the Enlightenment. Then the distinguishing characteristics of the Enlightenment are given. The Scientific Revolution is discussed next, specifically focusing on how this revolution secularized knowledge and why these scientific discoveries were significant from an intellectual standpoint. The concept of natural law and how it derived from science is examined. Ideas of Thomas Hobbes and John Locke with respect to natural law and individual rights are considered, compared, and contrasted. Finally, the lecture concludes with a discussion of how the American system of due process of law developed from this historical context and how it expresses the Enlightenment mindset. (Author/NE)

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The Enlightenment and Due Process of Law

by Lois Nettleship

Spring, 1982

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JOHNSON COUNTY COMMUNITY COLLEGE

SP 014 284

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Introduction

My purpose in this module is to describe the economic, social, intellectual and political changes which took place during the Enlightenment period and to show the inter-relationship between these changes and the concepts behind due process of law. This module will describe the historical context within which due process developed. The underlying assumptions of this module are two:

1. That there is a particular world view or mind-set which characterizes a given historical age and informs its various areas of activity, from politics to economics, from religion to science

2. That legal systems are not unchanging moral absolutes, but reflections of particular value systems which change as the mind-set of society itself changes

With these assumptions in mind, I will discuss the following:

1. Brief description of due process of law in England and the United States

2. Economic and social background of medieval Europe

3. Changes in the intellectual and religious life of Europe before the Enlightenment

4. Distinguishing characteristics of the Enlightenment

5. The Scientific Revolution and how it secularized knowledge with specific discussion of Copernicus, Ptolemy, Kepler, Francis Bacon, Descartes, Galileo and Newton

6. Significance of these scientific discoveries from an intellectual standpoint

7. Concept of natural law and how it derived from science

8. Major ideas of Thomas Hobbes and how he deals with natural law

9. Major ideas of John Locke and how he emphasizes individual rights

10. The Glorious Revolution and how it put Locke's ideas into practice

11. Comparison and contrast between the thought of Hobbes and Locke with respect to individual rights and the secular basis of authority

12. How the American system of due process of law developed within the historical context discussed above and expressed an Enlightenment mind-set

In addition to the lecture below which includes the above points, this module includes questions for essay exams, discussion and student projects and primary historical sources as additional reading assignments with questions. All of these deal with the material covered in the lecture.

Objectives

After completing this unit the student should be able to:

1. Describe the main features of due process of law
2. Contrast due process with an alternative system of justice based upon Divine authority
3. Describe the major economic, social, political and religious characteristics of medieval European life
4. Describe how these characteristics changed during the period 1500 to 1700
5. Describe the Scientific Revolution and the contributions of Copernicus, Kepler, Francis Bacon, Descartes, Galileo and Newton
6. Contrast the Ptolemaic view of the solar system with the Copernican and show the religious significance of each
7. Describe how the Scientific Revolution affected the intellectual assumptions of European thought
8. Describe the distinguishing characteristics of Enlightenment thought
9. Describe natural law and its relationship to the Scientific Revolution
10. Summarize the main ideas of Thomas Hobbes
11. Summarize the main ideas of John Locke
12. Compare and contrast the ideas of Hobbes and Locke with respect to the social contract, the function of government, individual rights and secular authority
13. Describe what the Glorious Revolution accomplished
14. Describe an Enlightenment mind-set and contrast it with a medieval one
15. Describe how the concepts behind due process of law relate to an Enlightenment mind-set

Learning Activities

Before reading the materials which follow, the student should look up brief descriptions of the following people and events in such works as the Columbia Encyclopedia, the Encyclopedia of the Social Sciences, and the Encyclopaedia Britannica, and write a concise summary of the facts concerning them. Ask the reference librarian to suggest additional, appropriate works for you to consult which are on the same level as those mentioned above. The list includes the following: Aristotle, Ptolemy (the mathematician), Copernicus, Kepler (the astronomer), Francis Bacon, Descartes, Galileo, Newton, Hobbes, Locke, natural law, and the Glorious Revolution.

Lecture

The Anglo-Saxon system of jurisprudence is a relatively recent development, even among the British people and their descendants. It is not a universal system, but rather an alternative to what we might call the standard system of justice. To understand the American system of justice, based upon the Anglo-Saxon system, we need to understand the alternatives.

In the beginning, all states were the family writ large. The king was the head of the state, as the father was the head of the family, and the king ruled by reference to a standard thought to be determined by God, set out in Scripture or other Divinely revealed code. Usually this was interpreted by some sort of ecclesiastical authority. Thus, the king or his ministers made judicial decisions based on what they took to be Divine authority. This, in brief, is the system of justice we see in the Bible, where law was revealed in the commandments of God and carried out by the kings. We see this idea expressed in literature from the Bible to the modern age. William Shakespeare, for example, holds that the state depends on a good king, one who understands the order of the world and maintains the stability of the state and domestic tranquility. Henry V is an example of such a king. Macbeth or King Lear are examples of bad kings, kings who do not know the order of the world and whose kingdoms fall apart. In such a system, problems arise from the work of bad kings or their inability to maintain the Divine order. None of the features we know as "due process of law" are necessary in such a system because truth is thought to be known and codified. The judicial process needs only to apply that fixed truth to each situation.

Modern common law and due process as we understand them have developed since the sixteenth century and have been largely confined to Great Britain and the countries which inherited a British system. Elsewhere, the system of codified law has been continued although refined and clarified with modern

codes. The British system is an "adversarial" one based on two propositions: 1. There is no absolute truth fixed for all time, but only a process whereby truth or partial truth can be determined in a given situation. 2. Governments are inherently more powerful than the individual, and a judicial system should protect the rights of individuals. This protection of the individual's rights is a more important end than the efficiency of government. In the adversarial system the individual and the government appear in court on a reasonably equal footing. We can say then, that this system looks for a good process, not for good codes interpreted by good kings.

The major features of our system which we call due process, follow from the need to establish a rough equality between the individual and the state; we attempt to find justice not relative to a fixed, foreknown truth, but from the given circumstances of individuals and what they can know from their senses. The major features of due process are the use of search warrants, the writ of habeas corpus, the protection against self incrimination, the right to trial by jury, to open charges and to confront one's accusers. The system overall requires the government to gather and present evidence in an open way, and to prove its case before the community as represented by a jury, and to release a prisoner against whom nothing can be proved.

This legal system developed over the last few centuries in Britain and other English-speaking countries at the same time that many of the features of modern scientific, religious and political thought developed. During this time, social and economic life began to change as well, from a medieval system to the capitalist system we know today. In the text which follows, I will discuss the intellectual and social changes which took place at the time. These changes did not necessarily cause the judicial system to change to the adversarial system we know today, but all these changes together reflect a changing mind-set which can be summarized as follows: in the past, people believed that the world was the

result of Divine action, or of action beyond their ultimate knowing; in recent times people have thought that they could understand at least what was before their senses. We call this attitude empiricism. The several areas of thought I will describe below are all features of a single change of mind, from belief in Divine action to belief in empiricism. The modern mind, like the medieval one, presents a coherent and interlocking set of ideas, each dependent on the others, and all together leading to the changes which have transformed our world.

The Background

Medieval Europe was a peasant/landlord society engaged chiefly in agricultural production for local consumption. There was very limited trade between regions and no mass markets as we know them. Manufactured goods were either simple, locally made products such as nails, or expensive items like fine cloth or weapons which had a value high enough to justify the high cost of transportation. These latter items were made in a few cities in Europe or imported from the Orient. Their manufacture and trade engaged a tiny proportion of the population. The rest of the population, peasant and landlord alike, were born to their positions and passed their lives in a largely cashless economic hierarchy in which obligations were settled generally by service or percentage of crops.

The peasant system never covered all of Europe; even in the thirteenth and fourteenth centuries there were trading cities in Italy which derived their income from commerce. As the medieval system waned, this early form of capitalism spread. The new system had several mutually supporting features: there was more trade and necesarily a greater use of money transactions; regions were no longer totally self-sufficient, but began to specialize in what they could make or grow more economically. As the peasant system decayed, it was no longer possible to carry on economic life on a face-to-face basis, and gradually a contract system came to replace the old system of obligations. In addition, as crops such as wool began to have a cash value in regional and world markets,

English landowners began to enclose their common lands so that they could graze their sheep. This, in turn, increased the wealth of the landlords, but often impoverished the peasant who was, at times, forced by circumstances to leave his land and become a hired laborer either in the field or the town. In either case, the traditional community bonds were broken.

All of these changes meant a change in attitudes as well: in the past, people were born to the roles they filled; in the new system, each person (at least in theory) could make his own place. In the past, society was a hierarchy at birth. Now there began to be competing hierarchies of wealth and more room for individual initiative.

The Rise of Modern Intellectual Life

The period between 1500 and 1800 saw the decline of the peasant economy and the rise of early capitalism in Europe. This was also the time of the Reformation and the end of the Medieval Church as a universal body. Henceforth, western Christianity was divided between a new Protestant theology and the revived Roman Catholic theology of the Counter Reformation. Europeans left their shores in a great series of voyages, establishing trading routes and colonies in the Americas and the Orient. Intellectually, they reclaimed their heritage from the ancient classical world in a movement we call the Renaissance (literally, rebirth). They also began a new intellectual inquiry, one outside the old framework of churchly and classical knowledge. This intellectual inquiry has been called the Enlightenment. All of the movements mentioned above contributed to the decline of old authority and to a new and important place for the individual. But of them all, the Enlightenment was the most significant in leading to secular values, economic and political individualism, and scientific process, in short, to the modern world as we know it.

What was the Enlightenment?

The Enlightenment, also called the Age of Reason, refers to the period from approximately 1650 to 1800, during which new ideas of human rationality spread through Europe and took hold of the mainstream of European thought. Full of various currents and emphases, Enlightenment ideas were themselves diverse and influenced such diverse areas as science, philosophy, law, economics, religion, politics and history. Nevertheless, there were common ideas which shaped all thought characteristic of the Enlightenment. These are:

1. A belief in a rational and scientific approach to all areas of human experience; that is, a belief that the world operates according to orderly and predictable universal principles amenable to human observation and understanding

2. A secular view of the world and a distrust of superstition, clericalism, and dogmatic sources of authority

3. A belief in progress, an overall optimism about the human power of perfectability, and a sense of confidence in the ultimate harmony between rational humanity and the universe

These ideas were applied by Enlightenment thinkers to nature, society, and all human discourse. The Enlightenment was an international movement, drawing upon the ideas of thinkers from many parts of Europe and America, but its first home was England and three of its major champions were English: Francis Bacon, Isaac Newton, and John Locke. We will discuss these men below.

The Scientific Revolution: The Background

All three of the fundamental ideas of the Enlightenment outlined above owed something to the change in scientific thought. Scientific thinkers turned from authority based systems to observation based systems. No system was more radically changed or in turn more changed other systems than science. Scientific thought was as central to the Enlightenment as religious thought was to the Middle Ages.

Even before 1650, scientists began to look at the world in a new way which culminated in the achievement of Isaac Newton (1642-1727). In order to understand this new "scientific" way of seeing the natural world, let us examine how medieval man approached science. In medieval times (1000 to 1500, approximately), those concerned with how the natural world worked went to sources of authority rather than to the natural world itself to gain knowledge. In most cases, this meant going to the Church, that is, to Church doctrine (including the Bible as interpreted by the Church), and to what churchmen had said about natural phenomena. The Church was the source of intellectual and spiritual authority in medieval Europe. Outside the Church, the literacy rate was low and it was common for kings and aristocrats as well as the common people to be illiterate. Naturally, books even the Bible, were rare. Politically, Europe was divided into various kingdoms, but until the Protestant Reformation of the sixteenth century, all of western Europe belonged to the Roman Catholic Church except for a small minority of Jews and Moslems. In fact, the word catholic means universal. The society was agricultural, and as mentioned above, most people lived in small rural villages. Here they formed their allegiance to local ways and to the local Church which was part of the "universal" Catholic Church with its headquarters in Rome and its clerical hierarchy, chosen by Rome. The Church held sway over intellectual matters for essentially three reasons:

1. There was no separation between the spiritual and the intellectual. Catholic orthodoxy governed not just worship, religious belief, and moral conduct (what we call spiritual matters), but how you thought about the universe (intellectual matters), and even in large part how you conducted your material life (economics). Spiritual concerns informed all aspects of medieval life, and the separation we expect between the sacred and the secular did not exist.

2. The Church had a monopoly on whatever learning there was. Schools and universities were few, and what few there were were dominated by the Church and existed primarily for the purpose of training the clergy.

3. The Church was hierarchical and unified, and it pronounced on what was true (orthodox) and false (heretical). As an institution it functioned as a complete system of authority. If there had been open disagreement as to what was right and wrong, then the Church would have lost its position of authority and in the view of the Church, all would have disintegrated into chaos.

The scope for individual inquiry and determination of truth was extremely limited. For much of this period, however, we must remember that the choice was usually not between Church dogma and individual quest after truth, but between Church dogma and superstition. In any event, for those who were concerned with how to find out about the natural world, there were two acceptable sources. One was the Church, the Church fathers (scholastics), the Bible and the body of the orthodox doctrine proclaimed by various Church councils. The other was Aristotle, the Greek philosopher (384-322 B.C.) who was accepted by the Church. Aristotle had written about physics, biology and logic, among other things. Medieval scientists thus went back to Church teachings and to Aristotle to find out about the natural world. For instance, if the medieval scientist found a new leaf, he would first try to find out what the Church and Aristotle had said about leaves in general and then try to fit his new leaf into their categories. Aristotle had developed a construction in logic called the syllogism. It went from the largest general category to the specific, a method known as deduction. Here is a well-known example of a syllogism:

All men are mortal (major premise)
Socrates is a man (minor premise)
Therefore Socrates is a mortal (conclusion)

Let us suppose that Aristotle had said, "leaves are the organs through which trees respire," then our medieval scientist would probably have constructed his own syllogism as follows:

Leaves are the organs through which trees respire (major premise from Aristotle)
This plant is a leaf (minor premise)
Therefore this plant is the means through which its tree respires (conclusion)

The syllogism is structured to go from a broad or general category of information to the particular. Even if the above conclusion is in fact correct, it presents the modern scientist with several problems. First, the scientist could never obtain more fundamental knowledge than that contained in the major premise with which he started because his conclusion was derived from it. Second, such a method (known as deductive because it deduced information from the general to the particular) discouraged direct observation of the natural world in favor of logic and scholarly research from works which were themselves untested and handed down from the ancient past on the basis of authority rather than experimentation. Third, this method discouraged or limited scientific experimentation. Fourth, since the ultimate truth was believed to have been known through Aristotle and Church teachings, all discoveries had to square with those teachings or else they were considered to be false or heretical. There were other problems as well. Superstition held sway. Astronomy and astrology were linked together, as were chemistry and alchemy, numerology and mathematics. In other words, phenomena of the natural world were not seen as behaving according to laws but as tied to supernatural agencies and human purposes.

Changes in the medieval outlook began to take place during the sixteenth century. In part they resulted from the specific scientific discoveries discussed below. In part they resulted from larger and more diffuse phenomena which cannot be pinned down to a specific event or person. The latter had to do instead with new attitudes of independence and individualism fostered by the Renaissance and Reformation. As mentioned above, the Renaissance was a movement of artistic and intellectual revival which took place in Italy during the fifteenth and sixteenth centuries. During the Renaissance, many great works of the ancients were rediscovered, translated, edited and published. This brought into Europe an infusion of new information, information independent of the Church and

encouraging a critical spirit and sense of perspective, both of which were helpful to the ultimate development of science. Likewise, the Protestant Reformation of the sixteenth century, which led many to break away from the Catholic Church and form their own various Protestant denominations, emphasized the duty and capability of the individual to question Church authority and understand the Bible and theological questions for himself. This too encouraged an independence of mind and central place for the individual which aided the later development of scientific thought.

Pre-Newtonian Discoveries

Scientific discoveries and new approaches to the natural world were numerous during the century or so before the start of the Enlightenment. Although each was important in its own right it was the cumulative effect which was crucial in creating the critical inquiry, systematic method and careful observation of nature necessary for the new Enlightenment outlook. The earliest of the scientists to contribute to this outlook was Nicholas Copernicus (1473-1543), the Polish astronomer and mathematician. On the basis of his observation of the motion of the planets and his desire to come up with a mathematical formulation more straight forward (scientists would say more "elegant") than the accepted theory of Ptolemy, Copernicus put forward his theory that the earth revolves around the sun. This differed from the commonly held view of the Bible and the Egyptian astronomer and mathematician Ptolemy (fl 127-151). The Ptolemaic theory was geocentric or earth-centered as opposed to the heliocentric or sun-centered view of Copernicus. The startling thing about Copernicus' theory was that it differed from the wisdom of the ancients and the teachings of the church.

Johann Kepler (1571-1630), a German astronomer, built on the Copernican theory and made use of the mathematical calculations done by the Danish mathematician, Tycho Brahe (1546-1601). Kepler theorized that the planets (including

the earth) traveled about the sun in an elliptical orbit rather than the circular orbit suggested by Copernicus. Kepler was able to reconcile the astronomical calculations of Brahe (who himself still believed in the Ptolemaic theory) with the Copernican heliocentric theory, and by this means, corroborated the Copernican theory with mathematics. Moreover, Kepler's work implied that the heavenly bodies might be less perfect than the ancients had thought in that they traveled in an ellipse, a less perfect form than the circle was thought to be.

Francis Bacon (1561-1626), an English contemporary of Kepler, did little in the way of making scientific discoveries. His contribution was to formulate inductive reasoning and to advocate its use as opposed to the deductive logic of Aristotle. As we have seen, deductive logic goes from the general to the particular, but inductive logic goes from the particular to the general. Induction requires observing the natural world carefully and collecting data from it. For instance, instead of concluding that a particular leaf must carry out respiration on the basis of deductive logic from a major premise handed down from the past, Bacon would have us observe how the leaf functions in the natural world and compare it with other leaves. In other words, to draw conclusions from our own specific observations in the practical, everyday, sense-world instead of the abstract world of the ancients and Christian teachings. Our generalizations should come from the accumulation of particular data which we observe for ourselves. As we mentioned, this method is called empiricism. It is the basis of our own modern experimentation. For instance, if we wanted to find out about the effectiveness of a new drug, we would test it on a sample of users and then calculate its effect before generalizing about it. Bacon's empiricism stirred a new interest in science (or what was then called "Experimental Philosophy"), and in 1645 the Royal Society of London for the Improving of Natural Knowledge was founded. The Society built a laboratory, collected specimens, reported experiments and overall furthered the work which Bacon had begun.

Rene Descartes (1596-1650) was a French mathematician and philosopher. He continued to use deductive logic in his work and for that reason is often contrasted with Bacon. Nevertheless, Descartes put forward several ideas which contributed to the development of modern science. Like Bacon, he believed that the tradition of medieval scholarship (known as scholasticism) had produced little of value in science. As a result he formulated his own rules for thinking. These included accepting only ideas that seemed clear and obviously true and arranging his ideas into an orderly sequence which could be retraced and examined. This new methodology and Descartes' boldness in doubting many of the accepted truths of his day called the authority of the ancients into question and furthered the new emphasis upon rationality.

The Italian astronomer, mathematician and physicist, Galileo Galilei (1564-1642), not only carried out his work with audaciousness and a critical spirit, but he believed that the universe was governed by a single series of mathematical laws. This idea assumed that the universe was a rational and uniform body, subject to laws which man could understand, if he looked for regularities rather than the hierarchies of order which Aristotle and the medieval thinkers had taken for granted. Galileo's accomplishments confirmed his idea. He built an astronomical telescope in 1609 and through its use discovered that the moon was made of the same rocky substance as the earth, and that the sun had spots. This raised the issue of whether the whole heavenly firmament itself was made of earthly matter, something the ancients had not suspected. Applying Kepler's findings that the planetary laws of motion could be expressed mathematically, Galileo looked for similar laws of motion for bodies on the earth. He discovered that bodies of different weights fall at the same velocity. This contradicted the position of Aristotle which held that heavier bodies will fall more quickly than lighter ones. Galileo also discovered the principle of inertia,

(that is, a body in motion tends to stay in motion), and thereby called into question an idea passed down from the ancients: that God was the "Prime" or "Unmoved Mover," the force behind all earthly motion. Finally, Galileo was convinced of the Copernican view of a heliocentric universe and promulgated it in his writings. As a result he was imprisoned for his views and stands to this day as a symbol of the searcher after truth who dared to contradict authority.

The Newtonian Revolution

Isaac Newton is known both for his own important scientific theories and for his synthesis of other earlier ones. His work was original, but like all of modern science, it was cumulative, built upon the results of others. The problem that Newton faced was this: Galileo had shown in his formulation of inertia that moving bodies on earth tend to stay in motion and to move in a straight line unless they are stopped or moved off course by another force. Kepler had shown that planets move in an elliptical course around the sun. Why do the planets move around the sun rather than continuing in a straight path through outer space? In 1687, in his Mathematical Principles of Natural Philosophy, Newton successfully brought these two theories together with his concept of universal gravity, and in the process, invented differential calculus to express his findings mathematically. According to Newton, all bodies on earth and in the solar system (that is, throughout the universe) exert a pull upon all other bodies. This exertion or gravitational pull is proportional to the mass of the objects and inversely proportional to the distance between them. Newton proved what Galileo had suspected, that the same laws operate in the heavens as on earth, in other words, that they are universal laws and can be expressed mathematically. Not only did Newton's theory of gravity account for the tides and other puzzling phenomena, but it formed the basis for a new cosmology, a new way of viewing the cosmos.

The idea of gravity which Newton put forward was itself paradoxical. On the one side, it was a concept which lent itself to precise calculations and predictions, which could be expressed through mathematics and could plausibly account for things otherwise strange and inexplicable. On the other side, gravity could not be depicted (for, it looked like empty space), and while its effect could be measured, its ultimate cause remained a mystery.

> But the idea of gravitation was not without its irony . . . Newton had expressed contempt for "occult qualities" . . . But was this mysterious gravitational force not an occult quality? What was more speculative than action at a distance through empty space?[1]

Newton's response to this paradox puts him squarely in the practical, empirical tradition of Francis Bacon which we discussed above. He did not pretend to know the ultimate cause of what he described, but he could continue to observe, measure and report its workings. To put it another way, "the scientist could proceed with his measurements and calculations even when the mysteries of nature remained impenetrable to him."[2] In this respect, Newton was a man of the Enlightenment. He could use his rational powers to understand and posit theories about what his senses told him.

In other ways as well, Newton exemplified the man of the Enlightenment. He sought universal principles, believing that one set of principles governed the entire cosmos. Like Galileo before him, he saw the natural world as a single unified whole rather than the stratified hierarchy of Aristotle and the medieval scholastics. In 1703, Newton became the president of the Royal Society, an institution mentioned above. The Society promoted an interchange of ideas on science through its publications, meetings and preservation of specimens. This, too, was an important part of the Enlightenment. For the idea that knowledge could be the province of all seekers within or outside the church who had the education to understand it, and that ordinary men themselves could add to the body of knowledge became prominent during the Enlightenment, but was scarcely held before.

There were many practical consequences which flowed from the discoveries of Newton and his predecessors, and these in turn affected the political, social and economic life of the day. According to R.R. Palmer:

> With Newton's work (which affected other fields than are here mentioned) the promise of science seemed fulfilled. Even in purely practical affairs conveniences followed, as anticipated by the Baconians. The tides could now be understood and predicted by the gravitational interplay of earth, moon, and sun. Exact mathematical knowledge of the solar system was of great help to navigation. In the eighteenth century chronometers were developed, making possible the finding of precise longitude at sea. Merchant ships and naval squadrons could thus operate with more assurance. Better determination of longitude, at sea and on land, was of great value to cartography, the science of map making. Eighteenth-century Europeans were the first human beings to have a fairly accurate idea of the shapes and sizes of continents and oceans. Or again, mathematical advance, including the development of calculus, which allowed an exact treatment of curves and trajectories, reinforced by technical discoveries in the working of metals, led to an increased use of artillery. Armies in 1750 used twice as many cannons per soldier as in 1650. Naval ordnance also improved. These were items making armed forces more expensive to maintain, requiring governments to increase their taxes, and hence producing constitutional crises. Improved firearms likewise heightened the advantage of armies over insurrectionists or private fighting bands, thus strengthening the sovereignty of the state. They gave Europeans the military advantage over other peoples, in America, India, or elsewhere, on which the world ascendancy of Europe in the European age was built. This example, chosen somewhat at random, suggests the almost inconceivable ramifications of the practical consequences of science.[3]

We can summarize the effect of scientific thinkers by saying that they called into question the intellectual methods and the dogma of the authorities, both Greek and Churchly. Once Enlightenment thinkers began to question every other subject, religious, social and political. Scientific thought, in addition, questioned scriptural authority, and the Christian community has ever since been divided between fundamentalist and non-fundamentalist camps, that is, between those who take scripture literally and those who subject it to interpretation. The Scientific Revolution was, therefore, one of the earliest and most important parts of the Enlightenment.

The scientific revolution was important not only because of the new ideas and practical results it yielded in the natural sciences, but also because its ideas were applied to many areas of human activity, among them politics and the law. The application of these new ideas to the entire realm of Euroepan thought constituted the intellectual basis of the Enlightenment. One important concept which developed from the scientific revolution was that of natural law, a concept which became the basis for Enlightenment poitical theory in England and eventually the United States.

Natural Law

We have seen that the natural sciences uncovered universal principles of nature which men came to know not by consulting Scripture or accepted authority, but by using their powers of observation and reason. Enlightenment philosophers who followed the scientific revolution believed that natural law existed in the universe, and they determined what was right according to natural law rather than to custom or authority. Similar to the principle of gravity, natural law was thought to be universal and intelligible to man through observation and reason. Although Enlightenment philosophers belived that natural law was universal, they thought that it had not found expression in the actual habits, customs, and day to day applied law (positive law) of their contemporary societies. These philosophers attempted to put their ideas about the nature of man, law, government, and society into practice. For instance, when Thomas Jefferson wrote in the Declaration of Independence, "We hold these truths to be self-evident that all men are created equal," he was expressing what he believed was a principle of natural law ("self-evident" because it was natural), and was attempting to put it into practice by means of the American Revolution. In fact, the concept of natural law has often become the political basis of democratic societies. Not all Enlightenment philosophers agreed on what constituted natural law, but they accepted the idea that there were certain laws found

in nature. Thomas Hobbes and John Locke were two Enlightenment philosophers who observed nature and wrote about natural law, but disagreed on their conclusions about human nature and political rights.

Thomas Hobbes

Thomas Hobbes (1588-1679), English philosopher and author of Leviathan (1651), was extremely interested in the scientific discoveries of his day and was a friend of Galileo. Hobbes based his ideas in part upon his observation of the English Civil War which began in 1642 and resulted in 1649, in the regicide of King Chas I with whom Hobbes sympathized. In Leviathan, a work of political philosophy, Hobbes argued that in nature man is selfish and in constant conflict with his fellows; his life is "nasty, brutish and short." According to Hobbes, men in nature were equal in their selfishness and fear of violent death. This fear caused them to form a state in which they agreed by social contract to give up their original liberty (mean though it was) to an absolute ruler who was to keep the peace and was not subject to the law. Hobbes believed that man needed to be curbed and that the function of government was to restrain him from his own appetites. His writings justified royal absolutism.

The thinking of Hobbes is typical of the Enlightenment in its secularism. He based his theories upon his own observations of man's behavior and not upon what he took to be divine authority. He described man with reference to nature, to man's "nature," and to natural law, not with reference to Divine will. According to Hobbes, no government, even monarchy, is by divine right. It is made by social contract, by man's consent to relinquish his original liberty for the sake of order. The thinking of Hobbes was rejected as a basis for government in England and Europe, but it influenced other thinkers who accepted his idea of the social contract while disagreeing with his pessimistic view of human nature and his arguments for absolutism.

John Locke

Like Hobbes, John Locke (1632-1704) was also secular in his outlook and interested in science. As a young man he had studied medicine. He agreed with Hobbes that government was not based upon divine will, but upon a social contract, an arrangement consciously devised by man. Locke disagreed with Hobbes on man's nature. He did not believe as Hobbes did, that man was selfish and brutish and needed to be restrained. Instead, Locke viewed man as tolerant, happy and capable of reason. Locke, therefore, disagreed with Hobbes on the proper function of government. Hobbes believed that the government should take a punitive stance toward the individual. Locke believed that government should clear the way so that man could realize the goodness and reason of his true nature and enjoy his natural rights, what Locke saw as life, liberty and property. (Jefferson called similar rights "inalienable rights" in the Declaration of Independence.) To Hobbes, the social contract which man devised exchanged his liberty for a government which would control him. Man could not abrogate the contract. Once he had surrendered his original liberty to an absolute ruler, man could not break the contract nor subject the ruler to any laws. To Locke, the social contract was a mutual agreement between the people and their government whereby the people agreed to abide by the laws (which they as a group make through their representatives) in order that the government could better protect their rights. If the government abused or in other ways failed to protect their rights, then the people could form a new government which would protect their rights and thus enable them on an individual basis to each pursue their own ends. Locke believed that cooperation and the general good would result from such individual pursuit. Thus, the function of government for Locke was to protect the individual's natural rights. If it should fail to do so, man must create a new government.

The Glorious Revolution

During Locke's lifetime, such a "new government" was created in England. Throughout the seventeenth century, England had been beset by conflicts between King and Parliament. As we mentioned earlier, there had been a civil war and regicide. These had been followed in 1649 by the setting up of a Puritan republic under Oliver Cromwell. This republic fell and was replaced in 1660 by the restoration of the monarchy with Charles II (reigned 1660-1685), son of the beheaded Charles I. Once the monarchy was restored, conflict between King and Parliament resumed until 1688, when a "new government" was created. Let us look briefly at the major political conflicts which took place in seventeenth century England between Parliament and King.

The British kings during this time believed in royal absolutism. They held the view discussed above, that they were chosen by God to rule their subjects. They saw themselves as the father, and their subjects (including Parliament) as their children. This idea was expressed in 1598 by James I (ruled 1603-1625).

> The King towards his people is rightly compared to a father of children, and to a head of a body composed of divers members, for as fathers, the good princes and magistrates of the people of God acknowledged themselves to their subjects . . . The head cares for the body, so doeth the king for his people. As the discourse and direction flows from the head, and the execution according thereunto belongs to the rest of the members, everyone according to their office; so it is betwixt a wise prince and his people . . .[4]

Parliament, on the other hand, was made up of men who distrusted the Divine authority of kings and who wanted to limit monarchical power. Most of the members of Parliament were landholders, and especially after 1660, they were the major landholders. In addition, they were well educated, accustomed to disposing of their own affairs, and oriented toward the individual rights which Locke described. The members of Parliament were Anglicans, a Protestant denomination. For two extremely interesting decisions of the relationship between a

Protestant outlook individualism and capitalism see: R. H. Tawney, Religion and the Rise of Capitalism, and Max Weber, The Protestant Ethic and the Spirit of Capitalism. They saw these rights as extending back to earlier English traditions and were angered by the various monarchical measures to curb their power. Their complaints against the Crown which bear on our discussion can be summarized as follows:

1. Royal disregard of common law including trial by jury. Instead the kings had their own courts, such as the Court of the Star Chamber and the Court of High Commissions in which royal officials made their own law and were not bound by due process.

2. Royal disregard of Parliament and the Parliamentary power to raise taxes. Instead the kings had a contemptuous attitude toward Parliament, rarely called Parliament into session, and attempted to raise money without the backing of Parliament. Many members of Parliament were landlords and feared that if this continued they would be taxed on their property without their consent.

In the Glorious Revolution of 1688, the Parliament won its conflict with the Crown. It forced James II (ruled 1685-1688) to flee and invited his daughter Mary and her Dutch husband William III (William of Orange) to assume the British crown as constitutional monarchs whose powers were limited by Parliament in the Bill of Rights. The Bill of Rights (1689) not only limited monarchical power, but spelled out Parliamentary power and certain individual rights. The provisions which are of interest to this discussion can be summarized as follows:

1. The monarch could not suspend, dispense with or execute laws without the consent of Parliament
2. Certain royal courts could not be reinstituted
3. The consent of Parliament was needed to levy money
4. The people had the right to petition the monarch
5. There could be no standing army without the consent of Parliament
6. There were to be free elections for the members of Parliament
7. There should be no excess bail or cruel and unusual punishment
8. Jurors should be duly impaneled

9. Fines and forfeitures of persons before conviction were illegal

10. Parliaments were to be held frequently

In sum, the Bill of Rights laid out the limits of monarchical power and the prerogatives of Parliament which could not be abridged. It provided for a contract between monarch and subject and protected the individual's rights to due process. Perhaps because the Parliament was made up of the large landowners, the great aristocracy, it was able to establish the basis for a constitutional and limited monarchy at a time when much of Europe practiced royal absolutism. As R.R. Palmer suggests, perhaps,

> . . . the landowning interest was then the only class sufficiently wealthy, numerous, educated, and self-conscious to stand on its own feet. The rule of the "gentlemen of England" was within its limits a regime of political liberty.[5]

Locke and the Glorious Revolution

Locke supported the parliamentary cause in the Glorious Revolution. It brought about the "new government" and society he advocated in his writings. Such a society was one based upon individual rights, upon the right of an individual to own property unless taxed by his own consent, and upon his right to protection on the basis of law, not on the basis of Divine intervention or a "good" king. Such a society then, had a secular foundation. Locke's position was an early statement of political liberalism, a position so familiar to us today that we tend to take it for granted. Nevertheless, it was in Locke's day a minority position, and even today it is a major opinion only in the societies of North America, western Europe and the British Commonwealth. In his championing of individual rights and human reason, Locke gave universal significance to what were essentially local political events.

> What Locke did was to convert an episode in English history into an event of universal meaning. In England, in 1688, certain great lords, winning the support of the established church, gentry, and merchants, put out one king and brought in another. On the new king they imposed certain obligations--specified in the Bill of

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> Rights of 1689, and all dealing with legal or technical interpretations of the English constitution. The Revolution of 1688 was a very English affair. England in 1688 was still little known to the rest of Europe . . . Locke, in arguing that Parliament had done right to eject James II, put the whole affair on a level of reason, natural right, and human nature. It thus came to have meaning for everyone . . . He gave new prestige to constitutional principles . . . To these views he added the force of the newer scientific view of the world. He did not rest his case on supernatural or providential arguments. He did not say that constitutional government was the will of God. He said that it rested on experience and observation of human nature, on recognition of certain individual rights and especially the right of property, and on the existence of a purely natural law of reason and justice. He was an almost entirely secular thinker.[6]

Locke created the political legacy of the Enlightenment. This legacy put the events of English politics on to a world stage and applied to them the same universal standard which the laws of science had invoked. Just as the law of gravity which Newton discovered did not vary, say, from England to Italy, but was the same throughout nature, so Locke's ideas of individual rights were thought to reflect a universal truth, applicable to all men, be they English or otherwise. Thomas Jefferson picked up Locke's ideas in the Declaration of Independence when he spoke of the United States as having the right, "to assume among the powers of the earth, the separate and equal station to which the Laws of nature and of Nature's God entitle them . . ." It is no wonder then, that Locke's ideas helped to bring about the political revolutions of the United States, France and eventually those throughout much of Europe.

To summarize our discussion of Locke and Hobbes, let us remember that they differed on their views of human nature: Locke thought of human nature as basically good and the role of government, therefore, to accomplish as a group what men could not as individuals. Hobbes saw human nature as basically evil, and the role of government was therefore to restrain men and establish public order. The tendencies of thought that Locke and Hobbes represent have persisted down to the present in the political movements we call "liberal" and "conservative." But however much they differed between themselves, they shared a secularism

which informed all of their thought. They were both Enlightenment thinkers. They both rejected Divine will as the basis for the state. They both turned to natural law as they understood it, and they both sought a secular basis for government and law. The state that each sought was one based not on authority but on consent. They are, therefore, together on one side of the question we are discussing. The opposite viewpoint is the idea of a religiously derived state such as the medieval monarchies of Europe and the British kings of the seventeenth century. Although such states have disappeared from Europe they are common elsewhere, for example in the fundamentalist Islamic states of the Middle East.

Conclusion

The difference between modern democratic states and the monarchies of medieval Europe is in the basis of their authority. In the medieval state, authority was based upon the doctrine of divine right. God was thought to have designated the King through birth, and what the King did therefore, had Divine sanction. If the kingdom languished, this was attributed to the King's being out of favor with God. As we have seen, the Enlightenment changed the nature of authority in Europe. Henceforth, knowledge was based upon observation, and though absolute government did not and has not disappeared, the way was open for a new kind of government and new legal system which were based on the observed needs of the people governed. They looked not to Divine will, but to the performance of given ministers of government, and they shaped the government to suit their needs. Since the Enlightenment, the world has become much more a world of relative values, of individual rights and of skepticism toward authority.

The American legal system has developed in this context. Justice in our system is the result of a process, as much as possible, an open, public process, to establish the truth as the community at a given time, with a given set of

circumstances, comes to understand it. This is not the same thing as an all-knowing designate of God (such as a king) interpreting absolute truth as set forth in the scriptures. Due process has developed as a way of protecting the individual from arbitrary use of state power. In societies like the United States which took their fundamental shape during the Enlightenment, there was the realization that the state was not a manifestation of Divine will. As such, the state could be wrong in a given action. Since the state had (and has) more inherent power than any one individual, it became necessary to protect the individual from state abuse by the set of procedures we call due process.

Footnotes

1. Shepard B. Clough, David L. Hicks, David J. Brandenburg, European History in a World Perspective (Lexington, Mass.: D.C. Heath and Co., 1975), II, 756.

2. Ibid.

3. R.R. Palmer and Joel Colton, A History of the Modern World (5th ed., New York: Alfred A. Knopf, 1978), 282

4. James I, "A Trew Law of Free Monarchies," reprinted in L.B. Smith and J.R. Smith, The Past Speaks to 1688: Sources and Problems in English History (Lexington, Mass.: D.C. Heath and Co., 1981), 308

5. Palmer, 173

6. Ibid., 293-294

Questions for Essay Exams, Discussion and Student Projects

1. The following five characters from Shakespeare's plays illustrate his views on the roles of kings. Study the characters listed below with a view toward the relationship between their individual actions and the fate of their respective kingdoms. Duncan and Macbeth from Macbeth and Henry V, Richard II, and King Lear, each from the play bearing his name.

2. Compare and contrast John Locke's Second Treatise of Government with the English Bill of Rights and the American Declaration of Independence. In what ways does the English Bill of Rights carry out Locke's ideas? In what ways not? Do the same for the Declaration of Independence. What do each of the three have to do with due process of law?

3. Summarize the main ideas of Locke's Essay Concerning Human Understanding. How do these ideas reflect those of the Enlightenment?

4. Compare and contrast Hobbe's Leviathan, with Locke's Second Treatise of Government. In what ways are they similar? What sort of government follows from each? Why?

5. We have talked about three models for governing: a) That of Divine authority as found in the Bible and medieval Europe; b) That of Hobbes as expressed in Leviathan; c) That of Locke as expressed in the Second Treatise of Government. Find positions taken by the moral majority on the role of government with respect to abortion, censorship, and school prayer. Based on these positions, which of the three models does the moral majority fit? Why?

6. Analyze the American Bill of Rights. What abuses does it try to prevent? What rights does it try to protect? How do its aims fit in with Enlightenment thought?